CLAIMS

WHAT IS CLAIMED IS:

1. A laser projection system comprising:

a Laser-CRT system that outputs white light;

a film delivery system including a film aperture, said film delivery system advancing film over the aperture, for illumination by said white light; and

projection optics for projecting a film image from said film onto a screen.

2. The laser projection system of claim 1 wherein:

said film comprises a series of frames;

said film aperture includes a system that momentarily stops each frame for illumination, and

said Laser-CRT system includes a faceplate scanned by an electron beam, and said scanning is synchronized with said film aperture so that said Laser-CRT system illuminates said film aperture only while a frame of said film is stopped.

3. The laser projection system of claim 1 further comprising a color temperature control system for selecting the color temperature of the Laser-CRT system.

4. The laser projection system of claim 1 wherein said Laser-CRT system includes a plurality of Laser-CRTS each providing a different color.

5. The laser projection system of claim 4 wherein said Laser-CRT system includes:

a red Laser-CRT,

a green Laser-CRT,

a blue Laser-CRT; and a

a beam combiner for combining the output beams from the red, green and blue lasers to provide said white light as a combination of colors.

6. The laser projection system of claim 1 further comprising conditioning optics that receive said white light from said Laser-CRT and provide said white light to said aperture.

7. A dual mode laser projection system that has a film mode and an electronic mode for projecting an image onto a screen, comprising:

a laser source that provides light having a plurality of colors;

projection optics;

a film module that includes a film aperture and a film delivery system that advances film over said film aperture;

wherein in the film mode said film module is situated to receive said light from said laser source, and said film aperture is configured to be illuminated by said light, thereby to supply an image to said projection optics for projection onto the screen;

an electronic module that includes a laser beam modulation system; and

wherein in the electronic mode, said electronic module is situated to

receive said light from said laser source, and supply modulated laser light to said projection optics to project an image onto the screen.

8. The laser projection system of claim 7 wherein said film comprises a series of frames, and wherein:

said film aperture includes a system that momentarily stops each frame for illumination, and

in said film mode, said laser source is synchronized with said film aperture so that said laser source is modulated by said laser beam modulation system to illuminate said film aperture substantially only while a frame of said film is stopped.

9. The laser projection system of claim 7 wherein said aperture includes a shutter.

10. The laser projection system of claim 7 further comprising a color temperature control system for specifying the color temperature of the light from the laser in the film mode.

11. The laser projection system of claim 7 wherein said laser source comprises a plurality of lasers each providing a different color, including a red laser, a green laser, and a blue laser.

12. The laser projection system of claim 7 wherein said laser source comprises a plurality of Laser-CRTs each providing a different color, including a red Laser-CRT, a green Laser-CRT, and a blue Laser-CRT.

13. A dual mode laser projection system that has a film mode and an electronic mode for projecting an image onto a screen, comprising:

a laser source that provides light having a plurality of colors;

projection optics arranged to project the image onto said screen;

a film module that includes conditioning optics including a beam combiner, a film aperture, and a film delivery system that advances film over said film aperture;

wherein in the film mode said film module is situated to receive said light from said laser source, said beam combiner is configured to combine said plurality of colors into a single beam, and said film aperture is configured to be illuminated by said single beam, thereby to supply an image to said projection optics for projection onto the screen;

an electronic module that includes a laser beam modulation system, conditioning optics including a beam combiner, and a scanning system; and

wherein in the electronic mode said electronic module is situated to receive said light from said laser source, said beam combiner is configured to combine said plurality of colors into a single beam, and said film aperture is configured to be illuminated by said single beam, thereby to supply an image to said projection optics for projection onto the screen.

14. The laser projection system of claim 13 wherein said film comprises a series of frames, and wherein:

said film aperture includes a system that momentarily stops each frame

for illumination, and

in said film mode, said laser source is synchronized with said film aperture so that said laser source is modulated by said laser beam modulation system to illuminate said film aperture substantially only while a frame of said film is stopped.

15. The laser projection system of claim 13 wherein said aperture includes a shutter.

16. The laser projection system of claim 13 further comprising a color temperature control system including intensity control for each color, thereby specifying the color temperature of the white light source.

17. The laser projection system of claim 13 wherein said laser source comprises a plurality of lasers each providing a different color.

18. The laser projection system of claim 17 wherein said plurality of lasers include a red laser, a green laser, and a blue laser.

19. The laser projection system of claim 17 further comprising a color temperature control system including intensity control for each color, thereby specifying the color temperature of said white light.

20. The laser projection system of claim 13 wherein said laser source comprises a plurality of Laser-CRTs.

21. The laser projection system of claim 20 wherein said plurality of Laser-CRTs include a red Laser-CRT, a green Laser-CRT, and a blue Laser-CRT.

22. The laser projection system of claim 20 further comprising a color temperature control system including intensity control for each color, thereby specifying the color temperature of said white light.